UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/079,966	02/21/2002	Jeffrey R. Cobb	WILY-01008US0	9235

7590   10/06/2005

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EXAMINER
BONZO, BRYCE P

ART UNIT	PAPER NUMBER
2114	

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/079,966	COBB ET AL.
	Examiner	Art Unit	
	Bryce P. Bonzo	2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>09 September 2005</u>.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>See Continuation Sheet</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) <u>1, 2, 6, 52, 80 and 58</u> is/are allowed.
6) ☒ Claim(s) <u>10,14-17,22,24-26,30,31,41,43,48-51,68,71,72,75 and 77</u> is/are rejected.
7) ☒ Claim(s) <u>3-5,7-9,11,12,56,62 and 81</u> is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on <u>21 February 2002</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims pending in the application are 1-12,14-17,22,24-26,30,31,41,43,48-52,56,58,62,68,71,72,75,77,80 and 81.

Non-Final Official Action

Status of the Claims

Claims 1, 2, 6, 52, 80 and 58 are rejected under 35 USC §103.

Claims 10, 14-17, 22, 24-26, 30, 31, 43, 41, 48-51, 68, 71, 72, 75 and 77 are allowed.

Claims 3, 4, 5, 7, 8, 9, 11, 12, 56, 62 and 81 are objected while containing allowable

matter.

Rejections under 35 USC §103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

Claims 1, 2, 6, 52, 80 and 58 rejected under 35 U.S.C. 103(a) as being

unpatentable over Cahill (United States Patent No. 6,021,272) in view of Os (United

States Patent Application Publication 2002/0162053).

As per claim 1, Cahill discloses:

accessing existing code for a first routine (column 4, lines 49-67);

automatically modifying said existing code by changing said existing code and

adding new code (column 5, lines 1-24 describe both modification of object code

"changing existing code" and insertion of diagnostic check pointing code "adding new code"); and

using said code and said changed existing code to determine if said first routine has *erred*.

Cahill does not explicitly disclose:

using said code and said changed existing code to determine if said first routine has stalled.

Os discloses:

accessing existing code for a first routine (¶18 the code must be accessed into to be hooked);

automatically modifying said existing code by and adding new code (¶18 clearly discloses hooking new additional code) and

using said code and said changed existing code to determine if said first routine has stalled (¶27).

Cahill clearly provides for the modification of code for diagnostic purposes (clearly stated in the Abstract) via both changing existing code and simply adding new code. Cahill further states the goal of the invention is to perform error checking, including but not limited to memory access errors (column 5, lines 18-22). Cahill readily contemplates the modification of his system for other forms of error detection (column 5,

lines 29-34). Cahill specifically mentions the need for this type of system in the development or debugging (column 1, lines 15-16). Memory access errors (specifically when a routine reads the wrong addresses and begin to execute code arbitrarily) are one of the main culprits of stalled computers. Os is geared specifically towards the detection of stalled applications via the use of timers maintained by a Check Alive thread. Os is specifically geared toward use in the beta development phase of software production (¶29). Thus it would have been obvious to one of ordinary skill in the art of software development to incorporate the enhanced features Os for stalled computer detection in to the debugging system of Cahill and thereby create a system which more comprehensively debugs computer software.

As per claim 2, Cahill discloses:

said existing code is modified prior to starting execution of said existing code (Figure 1);

said existing code is object (column 5, lines 1-23; and column 6, lines 8-39);

said new code is object code (column 6, lines 8-39).

As per claim 6, Cahill discloses:

said first routine is a method (column 4, lines 64: C++ is disclosed as a preferred high level language. C++ routines are methods, and the data they operate on are objects, not to be confused with object code); and

said changing said existing code includes adding code to said method to call said new code (column 5, lines 14-28 specifically modifying the existing code and directing program execution into new code).

Claim 52 is rejected as being the processor readable code embodiment of claim 1, and is rejected on the same grounds.

As per claim 80, Cahill discloses:

said existing code is object code; and

said new code is object code (both are covered in column 5, lines 1-23 and column 6, lines 8-39).

Claim 58 is rejected as being the apparatus of claim 1, and is rejected on the same grounds.

Response to Arguments

I. The Examiner agrees with the summary of the brief discussion of August 5th, 2005. As noted above only six claims remain under an art rejection, while all the remaining claims are either allowed or indicated as containing allowable matter.

II. Applicant argues that there is no motivation to combine the two references. The Examiner respectfully disagrees. A full and complete analysis is provided in the rejection of claim 1.

III. Applicant argues that Os does not detect stalled routines. The Abstract for the Os patent clearly describes the ideal use for detecting "becoming "hung", etc." The Examiner believes that Os has provided reasonable support for detecting stalled or "hung" application or routine.

IV. Applicant wished for expedient action on this application. This application has been acted two week after forwarding to the Examiner. Given average processing times within the Office, this is believed acceptable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryce P. Bonzo whose telephone number is (571)272-3655. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571)272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR.
Status information for unpublished applications is available through Private PAIR only.
For more information about the PAIR system, see http://pair-direct.uspto.gov. Should
you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).
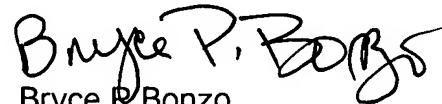
Bryce P. Bonzo
Primary Examiner
Art Unit 2114